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Detlef Teichner

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EXAMINER

CHOWDHURY, SUMAIYA A

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/890,315	Applicant(s) TEICHNER, DETLEF	
	Examiner SUMAIYA A. CHOWDHURY	Art Unit 2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Arguments, filed 6/8/09, with respect to claims 1-20 have been fully considered and are persuasive. The Office Action of 11/12/08 has been withdrawn.

(a) In the arguments, Applicant argues that the Office Action fails to consider the invention as a whole, and does not give the proper technical definition to the claimed bit stream decoder and demultiplexer.

The Examiner has withdrawn the previous Office Action and has applied new art which reads better on the claimed invention.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 10, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffiths (6262776) in view of Sebestyen (6236805).

As for claim 1, Griffiths discloses:

a data source (fig. 2) for compressed audio and video digital data, where the bit positions for the audio or video data are collected together in several connected component bit groups, the data source including:

a demultiplexer (splitter filter 206) to separate the compressed audio and compressed video data in one compressed signal (col. 11, lines 57-65);

a bit stream decoder (audio decoder 208) to decode the compressed audio data (col. 12, lines 11-13),

an audio buffer (audio buffer 212) for intermediately storing the separated audio data (col. 12, lines 13-27),

a bit rate converter (video decoder 216) to recode the compressed video data (The SPEC defines the bit rate converter as a component which reduces data during bit rate conversion; Griffiths teaches the video data is decoded (converted) and that some frames are dropped in order to help maintain synchronization with the audio data being played. By dropping frames, data reductions occurs. Col. 12, lines 28-40),

a video buffer (video frame buffer 220) for intermediately storing the separated video data (col. 15, lines 29-38),

a control unit (audio renderer 210 & video renderer 218) that is connected to the audio buffer and the video buffer, and which specifies and controls the adjustable intermediate storage time of the buffers (col. 12, lines 11-67, col. 15, lines 29-39).

However, Griffiths fails to disclose:

a bus interface that inserts the audio data and the video data into their corresponding component bit groups;

In an analogous art, Sebestyen a bus interface (Multimedia Multiplex – fig. 1) that inserts the audio data and the video data into their corresponding component bit groups (col. 2, lines 33-45).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Griffiths' invention to include the above mentioned limitation, as taught by Sebestyen, for the advantage of synchronizing the audio and video data such that when the viewer views the video, the audio corresponds to the video being watched.

Regarding claim 10, Griffiths and Sebestyen fail to disclose the data source comprises a DVD player, however the examiner takes Official Notice that it was well known at the time of the applicants invention to use DVD players as sources for compressed video such as commercial/theatrical releases of movies and audiovisual entertainment. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Griffiths and Sebestyen to include a DVD player (as evidenced by Nakatsugawa US 6,408,011 B1 – col. 9, lines 15-20 & 39) for the advantage of providing commercially available and inexpensive entertainment media of high quality.

Claim 19 contains the limitations of claim 1 and is analyzed as previously discussed with respect to that claim.

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4. Claims 2, 5, 6, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffiths and Sebestyen as applied to claim 1 above, and further in view of Ng.

As for claim 2, Griffiths and Sebestyen disclose where the bus interface inserts the decoded audio data, the recoded video data, and the recoded other data into their corresponding component bit groups (analyzed as discussed above in claim 1).

However, Griffiths and Sebestyen fail to disclose:

the data source for compressed audio and video data comprises a data source for other compressed data where the demultiplexer separates the other compressed data from the compressed audio data and the video data, and wherein the data source further comprises

a second bit rate converter for recoding the other compressed data; and

a data buffer for intermediately storing the separated other data.

In an analogous art, Ng teaches the data source for compressed audio and video data 510 (Ng - fig. 5) comprises a data source for other (auxiliary) compressed data (delta Y, delta I, delta Q – Ng fig.5) where the demultiplexer separates the other compressed data from the compressed audio data and the video data (Ng – col. 5, lines 43-49; col. 2, lines 14-15, 22-25), and wherein the data source further comprises

a second bit rate converter 542 (Ng – fig. 5) for recoding the other compressed data (col. 7, lines 34-36 & col. 7, lines 60-66; in which a compressed video source of variable bit rate is converted/recoded to a constant data rate for multiplexing with audio and control data – fig. 6), and

a data buffer (518 – fig. 5; 625 – fig. 6) for intermediately storing the separated other data (col. 5, lines 50-56; col. 7, 38-63).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Griffiths and Sebestyen's invention to include the above mentioned limitation, as taught by Ng, for the advantage of properly synchronizing signals which may exhibit different data rates.

Regarding claim 12, Griffiths, Sebestyen, and Ng teach a control unit connected to the audio buffer, the video buffer, and the other data buffer, that specifies and controls the adjustable intermediate storage time of the audio, video and other buffers as discussed in claims 1 and 2 above.

As for claim 5, Griffiths and Ng discloses analytical units associated with the bit stream decoder and the bit rate converters, where the analytical units determine a time relation of the compressed video data with respect to the compressed audio data, and where the analytical units are connected to the control unit to specify the intermediate storage times of the audio, video and other buffers (Griffiths discloses the analytical units

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are the components which synchronize the video data with the audio data. col. 12, lines 11-67, col. 15, lines 29-39. Ng discloses synchronizing data with other buffers as discussed in claim 2).

As for claim 6, teach the control unit controls the bit stream decoder and the bit rate converters to synchronize the time relation between the decoded audio data and the recoded video data (Griffits; analyzed as discussed above in claim 1) and the recoded other data (Ng; analyzed as discussed above in claim 2).

Claim 8 contains the limitations of claim 1 and is analyzed as previously discussed with respect to that claim. Claim 8 additionally discloses the following:

The bit rate conversion process performed by the bit rate converter is in dependence on one of the resolution and the size of a display in the associated data sink for video data (Ng – col. 5, lines 19-29).

It would have been obvious to provide bit rate reduction depending on the resolution of the receiver's display because it improves bandwidth efficiency by eliminating excessive bit rates while still providing a high quality image and minimizes receiver/decoder cost because the device will not require the more expensive equipment used to decode high bit rates.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Griffits and Sebestyen as applied to claim 1 above, and further in view of Wakai.

As for claim 3, Griffiths and Sebestyen fail to disclose at least one of the audio and video buffers is situated before the bus interface.

In an analogous art, Wakai teaches at least one of the audio and video buffers is situated before the bus interface (col. 24, lines 39-42).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Griffiths and Sebestyen's invention to include the above mentioned limitation, as taught by Wakai, for the advantage of reducing compression/decompression errors, i.e., "jitter", by synchronizing the rates of operation of data source/subscriber and the transmission network.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Griffiths and Sebestyen as applied to claim 1 above, and further in view of Kawamura.

As for claim 4, Griffiths and Sebestyen fail to disclose at least one of the audio and video buffers is interposed between the demultiplexer and the bit stream decoder and the bit rate converter associated with the audio and video buffers.

In an analogous art Kawamura teaches at least one buffer (6,9, and 12 – fig. 1) is interposed between the demultiplexer 5 and the bit stream decoders 8,11, 14 for synchronizing the signals based on decoding time stamps detected (par. 103, 165, 167, 22).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Griffiths and Sebestyen include at least one of the audio and video buffers is interposed between the demultiplexer and the bit stream decoder associated with it as taught by Kawamura for the added advantage of improving the quality of the system by enabling separated signals, e.g., from audiovisual content, to stay synchronized within themselves and the network when played back on a device (Kawamura –par. 22).

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Griffiths and Sebestyen as applied to claim 1 above, and further in view of Fujii et al. (US 5,898,695).

Regarding claim 11, Griffiths and Sebestyen fail to teach a data sink comprises a buffer for the intermediate storage of the received data, where an intermediate storage time of the data sink buffer is adjusted as a function of a control signal transmitted from the data source via the data line.

In an analogous art Fujii teaches the data sink comprises a buffer (71, 74 – fig. 1) for the intermediate storage of the received data, whose storage time can be adjusted as a function of the control signal 72 (col. 8, lines 4-27; col. 8, line 66-col. 9, line 3).

It would have been obvious to one of ordinary skill in the art at the time of the applicants invention to modify the system Griffiths and Sebestyen to include the data

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sink comprises a buffer for the intermediate storage of the received data, whose storage time can be adjusted as a function of the control signal as taught by Fujii for the added advantage of preventing decoding/receiving errors caused by the inherent delays in the system by synchronizing the audio and video programs (Fujii - col. 8, line 66-col. 9, line 3).

8. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffiths and Sebestyen as applied to claim 1 above, and further in view of Roppel.

As for claim 7, Griffiths and Sebestyen fail to disclose the data line comprises an optical data line.

In an analogous art, Roppel teaches the data line comprises an optical line (Roppel; Referring to fig. 4, when the signal is received it is initially processed by opto-electrical converter 14. Clearly, the signal is transmitted over an optical line).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Griffiths and Sebestyen's invention to include the above mentioned limitation, as taught by Roppel, for the advantage of using hardware which can carry more information as opposed to regular cables. a further advantage would be that optical lines are less susceptible to interference.

As for claim 9, Griffiths and Sebestyen fail to disclose:

the bit stream decoder decodes the compressed audio data by converting the compressed audio signal into a PCM signal.

In an analogous art, Roppel discloses:

the bit stream decoder decodes the compressed audio data by converting the compressed audio signal into a PCM (SPDIF) signal (Roppel discloses the audio data is transmitted digitally at different sampling rates. – col. 4, lines 21-28).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Griffiths and Sebestyen's invention to include the above mentioned limitation, as taught by Roppel, for the advantage of converting the signal to a form which is not easily affected by noise and interference.

9. Claims 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffiths and Sebestyen in view of Roppel.

Claim 13 contains the limitations of claim 1 and is analyzed as previously discussed with respect to that claim. Claim 13 additionally discloses the following: A subscriber data source that transmits data to respective subscriber sinks on a network.

In an analogous art, Roppel discloses subscriber data source that transmits data to respective subscriber sinks on a network (fig. 1; Abstract; vol. 3, lines 1-25).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Griffiths and Sebestyen's invention to include the above

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mentioned limitation, as taught by Roppel, for the advantage of communicating multimedia data throughout a network in a vehicle, thereby providing entertainment to passengers.

As for claim 14, Griffiths discloses wherein the data source comprises a device that generates the compressed source signal (RAM 25; col. 9, lines 1-12).

Claims 15-17 contains the limitations of claim 1 and are analyzed as previously discussed with respect to that claim.

Claim 18 contains the limitations of claim 1 and is analyzed as previously discussed with respect to that claim. Claim 18 additionally discloses the following:

A device that generates the compressed source signal including compressed audio data and compressed video data (Griffiths teaches the compressed audio and video signal supplied to the source filter in fig. 2 is received from source file 38 which is located in RAM 25. col. 9, lines 1-12).

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Griffiths and Sebestyen as applied to claim 19 above, and further in view of Roppel.

Claim 20 contains the limitations of claim 1 and is analyzed as previously discussed with respect to that claim. Claim 20 additionally discloses the following:

Transmitting audio and video data to data sinks network (fig. 1; Abstract; vol. 3, lines 1-25).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Griffiths and Sebestyen's invention to include the above mentioned limitation, as taught by Roppel, for the advantage of communicating multimedia data throughout a network in a vehicle, thereby providing entertainment to passengers.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUMAIYA A. CHOWDHURY whose telephone number is (571)272-8567. The examiner can normally be reached on Mon-Fri, 9-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sumaiya A Chowdhury/
Examiner, Art Unit 2421

/Joseph G Ustaris/
Primary Examiner, Art Unit 2424